

ABSTRACT OF THE DISCLOSURE

A computer-based technique for detecting edges in gray level digital images employs fuzzy reasoning to analyze whether each pixel in an image is likely on an edge. The image is analyzed on a pixel-by-pixel basis by analyzing gradient levels of pixels in a square window surrounding the pixel being analyzed. An edge path passing through the pixel having the greatest intensity gradient is used as input to a fuzzy membership function, which employs fuzzy singletons and inference rules to assigns a new gray level value to the pixel that is related to the pixel's edginess degree.